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Exhaust gas sensor for regulation of IC engine - produces differential output from catalyst-coated and uncoated electrode arrays as measure of completeness of combustion.

Patent Assignee: SIEMENS AG (SIEI)

Inventor: HANRIEDER W; KLEINSCHMIDT P; LAMPE U; MEIXNER H

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Abstract (Basic): DE 4228052 A

Two sensor arrays (1,2) of pref. platinum are mounted on a common substrate (3). Each sensor has two respective interdigital electrodes (4,5) also arranged on the substrate which exhibits a high thermal conductivity. The electrode pairs are covered with a thin oxygen-sensitive metal-oxide coating (6).

One array (1) only is additionally coated with a thin layer of catalyst (7) having max. specific surface area, to measure the oxygen-partial pressure of the exhaust gas. It is partly surrounded by a temp.-regulating thin-film zig-zag line and temp. probe (8).

USE/ADVANTAGE - Esp. on motor vehicles with exhaust catalytic convertors. Reliable sensor for cylinder-selective fuel/air mixt. ratio detection, reacts sufficiently quickly to detect misfiring and incorrect combustion.

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